

NeoLemmix

an interactive rodent simulation

Manual for V1.43

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1 Introduction

Lemmings are an incredibly cute piece of pixel art with green hair, blue dress, but absolutely no brain of their own. And so they come into the world to do the one thing they excel in: Walking straight into certain death. Well, almost certain death anyways, because there is always you, their god of infinite benevolence!

A god to guide them onto the highest mountain top...

A god to guide them into the deepest ravines...

A god to guide them over troubled waters...

A god to guide them past horrible traps...

In other words: A god to guide them to their well-deserved paradise!

2 How to run NeoLemmix?

2.1 System Requirements

- Windows 95 (or newer) or Linux with WINE.
- About 16MB disc space.
- About 128MB RAM.
- A working internet connection if you use the [online features](#).

This game needs no graphic card at all. And all other stuff are so low-level that we have yet to find a computer where this is a problem. Nevertheless the game may lag a bit on old and slow computers.

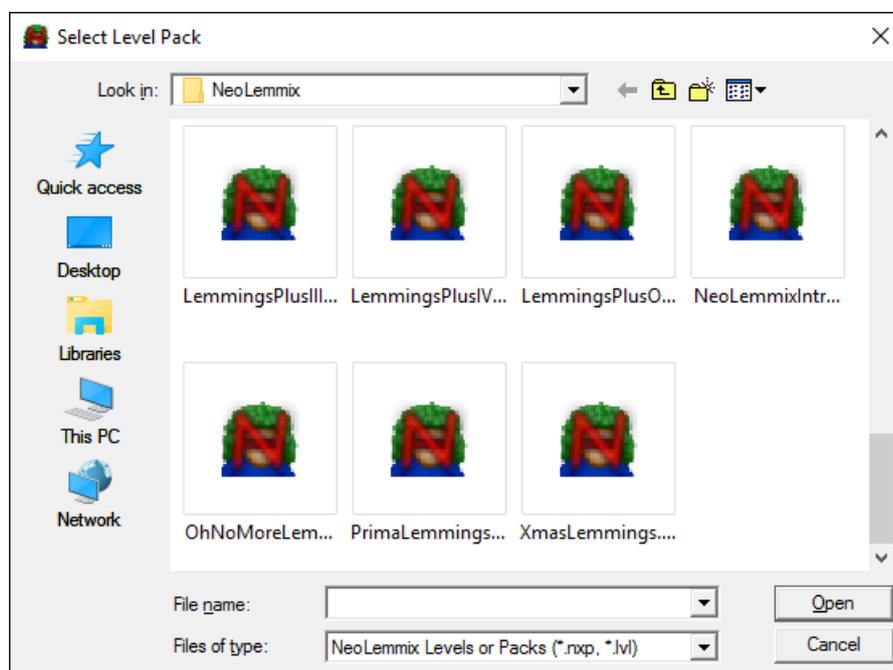
2.2 Installation

Actually no installation is needed at all. Put the `NeoLemmix.exe` in a directory of your choice. This is the player, but contains itself no levels to play. The next two sections explain how to load levels.

If you prefer a different version of the standard Lemmings music, download your favorite music as `.ogg` files and place it in a subdirectory `Music`.

2.3 Loading level packs

Level packs are files containing many levels. Their file extension is `.nxp`, e.g. the introduction pack is called `NeoLemmixIntroduction.nxp`. Download the level pack you wish to play and put this file in a directory of your choice. Some level packs come with their own custom music in a separate file called `[Level pack name]_Music.dat`. This file must be placed in the same directors as the `.nxp`-file, otherwise the game will play the standard Lemmings music. Start now `NeoLemmix.exe`, which will ask you to select either a level pack or a single level.



Go to the directory in which you have stored you level pack and select it. NeoLemmix starts now the [main menu](#) and you can play the level pack.

Alternatively you may try to open the `.nxp`-file directly. You will be asked which program to use to open this file. Select `NeoLemmix.exe` here and the level pack will start.

2.4 Loading single levels

The procedure of loading single levels is essentially the same as for [level packs](#): Place the level file in a directory of your choice. Its file extension is `.lvl`. After starting `NeoLemmix.exe` select this `.lvl`-file instead of a level pack. The game will start directly with the [preview screen](#) of your level.

Warning: When loading single levels you cannot change any [options in the option menu](#).

3 Starting a Level

3.1 Main Menu



1) Play (Hotkey F1 or Enter)

This starts the currently selected level. If you just started the game or changed the

2) Password (Hotkey F2)

Here you enter [passwords](#) to access any level in the level pack.

3) Rank

This displays the currently selected rank. A level pack may contain up to 15 different ranks. To change this, press the up or down arrow key.

4) Options (Hotkey F3)

This opens the [option menu](#), allowing you to customize NeoLemmings according to your preferences.

5) Talismans (Hotkey F6)

This opens the [talisman menu](#). If the level pack does not contain any [talismans](#), this button will not be present.

6) Exit (Hotkey Esc)

This exits the game.

Extract Files, Level Images and System Graphics

Some level packs let you extract all single levels as `.lvl`-files by pressing the key F4. These files will be saved in the subdirectory `DUMP` and the subsubdirectory called as the level pack. If you already have `.lvl`-files in this directory, they may get overwritten. You will be asked whether to hardcode the

oddtabling: If you select yes, then all levels are saved with all details. Selecting no, sometimes saves only the level settings without the terrain layout if the level designer used oddtabling.

In addition to saving the level files, you can save images of all levels in their initial state as .png-files by pressing the key F5. These files are saved in the same subsubdirectory as the extracted level files. Again any .png in this directory may get overwritten.

Remark: As the final warning says, saving image files takes a bit (approx. 30-60sec) and the screen will turn black during this time.

Mass replay checker

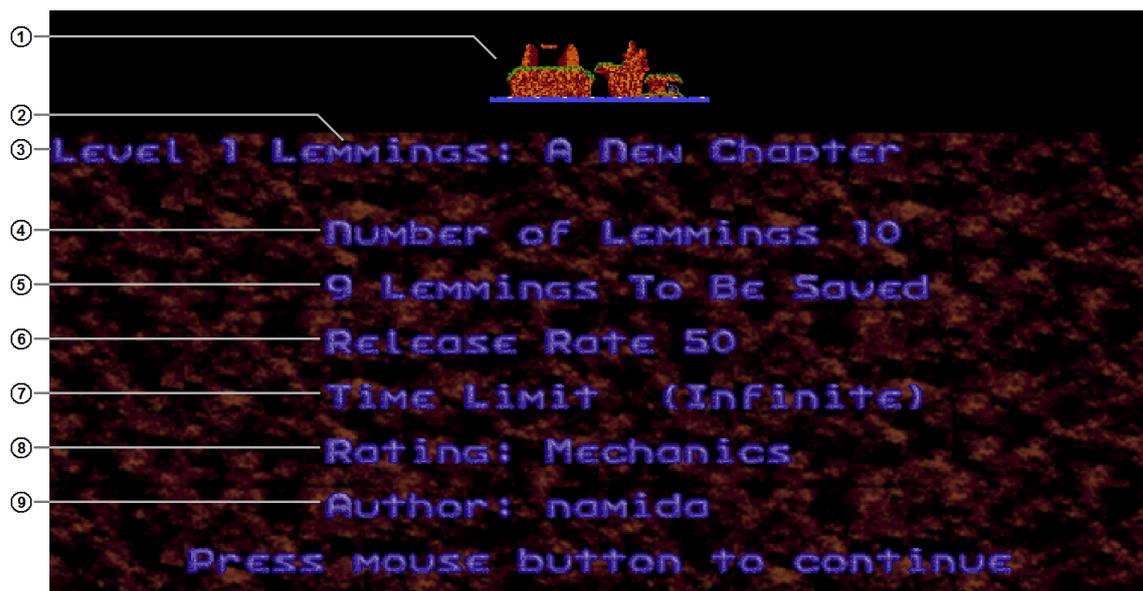
Pressing the key F7, starts the mass replay checker: After ignoring a brief warning, you may select one directory with replays to check. The game then tries to match each replay file to the correct level, either via the replay file name or via an internally stored level ID. After finishing all replays and output file called [Level pack name] Replay Results.txt is created. This text file lists all replays, the result, the level they were checked against and how this level was found. The replays are ordered in different categories, depending on the result of the check:

- **FAILED:** These replays killed too many lemmings or ran out of time.
- **UNDETERMINED:** 5 minutes after the last skill assignment there are still enough lemmings on the screen for the level to be solvable in principle, but not enough of them have yet reached the exit. In almost all cases, these replays should be seen as failures as well.
- **PASSED:** Replays, that solved the level.
- **ERROR:** Some error occurred while either loading the level or the replay.
- **CANNOT FIND LEVEL:** NeoLemmix was unable to match the replay file to any of the levels in the pack.

Remark: Once the replay checker is started, it cannot be aborted. Depending on the number of files, it might work for some time.

3.2 Preview Screen

Here you get a first impression of the level you are going to play.



1) Level Map

Here you can see a rough sketch of the whole level.

2) Level Title

The name the level designer has given their level.

3) Level Number

The number of the level within its rank. If you have [loaded a single level](#) this number is always 1.

4) Lemmings Available

This tells you how many lemmings are available to you. This includes any [preplaced lemmings](#), but does not account for [cloner skills](#).

5) Save Requirement

Here you can see how many lemmings have to reach the exit.

Do not be disturbed if this number is larger than the number of available lemmings. The level will give you some [cloners](#) letting you create further lemmings while playing.

6) Release Rate

The release rate determines the time between the appearance of two lemmings in the hatch, the higher the release rate the faster the lemmings spawn. A release rate of 1 gives you 53 frames or about 3 seconds between another lemming appears. While a release rate of 99 lets appear a new lemming every four frames, i.e. spawns roughly four lemming per second.

Remark: There is no difference between setting the release rate to an even number $2n$ or to the following odd number $2n + 1$. E.g. the release rates 50 and 51 both give you a 28 frames between two lemmings and the release rates 98 and 99 both spawn lemmings 4 frames apart.

7) Time Limit

The number tells you how long you have to solve the level, in the form **MM:SS** where **M** stands for minutes and **S** stands for seconds. For this game time is counted, not real life-time. So [pausing](#) is still possible even with a time limit. If you take too long and the time is over, the level automatically ends and sends you to the [result screen](#).

If you see "(INFINITE)" instead of a time, then there is no time limit at all and you may take as long as you wish.

8) Rank Name

Here you find the name of the rank you are currently playing. If you have [loaded a single level](#) the words TEST MODE are displayed instead.

9) Level Author

This line is optional and displays the name of the level author.

Hotkeys

There are a few hotkeys that can be used on the preview screen. In level packs they are:

- Enter or left-click: This starts the level.
- Right arrow: This moves on the next level, that is available to you, and displays its preview screen. If you hit this key on the last level of the rank, you will move to the first level of the *same* rank.

- Left arrow: This moves on the previous level. If you use this key on the first level of the rank, you will move to the last level in the *same* rank, that is available to you.
- [Save Image hotkey](#) (default hotkey I): This saves an image of the initial state of the level.
- R: A small pup-up window displays the maximal number of lemmings you have saved in previous successful attempts, and the time taken.
- Esc: This returns to the main menu.

Note that except for the Save Image hotkey, none of the hotkeys can be customized in the [options menu](#).

If you have loaded a single level, you have fewer options:

- Enter or left-click: This starts the level.
- [Save Image hotkey](#) (default hotkey I): This saves an image of the initial state of the level.
- Esc: This exits the whole game.

Preview text

Some levels have another bit of extra explanation. This will be displayed to you after pressing Enter or left-clicking on the [preview screen](#). You can start the actual level by pressing Enter or Left-Clicking again. With Esc you return to the main menu.

3.3 Level Screen

This is the screen you will spend the most time on. Here the lemmings actually walk around and need your help.



1) Level Layout

Here the level layout is depicted. The different objects are discussed in the [level component section](#) and the [advanced level components section](#). By moving your cursor onto a lemming, you can assign the [skill](#) currently selected in the [skillbar](#) with a left-click with your mouse.

Levels may be much bigger than the part you see. By moving your cursor to the edge of the screen you can scroll around.

2) Description of selected lemming

Once you move your cursor on a lemming, some details are displayed. The possibilities are:

- **WALKER**: The lemming currently has neither permanent [skills](#) nor uses any other [skill](#) right now.
- **CLIMBER**, **FLOATER**, **GLIDER**, **SWIMMER** or **DISARMER**: The lemming has the respective permanent [skill](#), but no other. He needs not to use the respective [skill](#) for this to be displayed.
- **ATHLETE**: The lemming has precisely two of the permanent [skills](#). Use the [Show Athlete Info hotkey](#) to get more information.
- **TRIATHLETE**: The lemming has precisely three different permanent [skills](#). Use the [Show Athlete Info hotkey](#) to get more information.
- **X-ATHLETE**: The lemming has precisely four permanent [skills](#), i.e. is a [climber](#), [swimmer](#), [disarmer](#) and either a [floater](#) or a [glider](#). Use the [Show Athlete Info hotkey](#) to get more information.
- **BLOCKER**, **BUILDER**, **PLATFORMER**, **STACKER**, **BASHER**, **MINER** or **DIGGER**: The lemming uses this skill currently. This does not override any permanent skills, i.e. a [climber](#) who currently [bashes](#) through some terrain will be described as **CLIMBER** not **BASHER**.
- **EXITER**: This lemming has just reached the exit and enters it.
- **FALLER**: This lemming falls through the air. You can be sure that he is neither a [floater](#) nor a [glider](#).
- **OHNOER**: This description is displayed for lemmings that were given the [bomber](#) or [stoner](#) skill during the last seconds (or better frames) of their life.
- **SHRUGGER**: This lemming was a [builder](#), [platformer](#) or [stacker](#) and has finished his task. To signal this, the lemming displays a short shrugging animation waiting to see, whether you have another [skill assignment](#) for him.
- **JUMPER**: If a lemming encounters a step three to six pixels high, it will take him an extra effort to continue walking. During this short animation, he will be described as a **JUMPER**.
- **DROWNER**: This lemming is on the verge of dying in [water](#) or an equivalent game element. He can only be saved by turning him into a [swimmer](#).
- **SPLATTER**: Hitting the ground after a too long fall, this lemming dies right now and nothing can save him.
- **FRIER**: This lemming walked into a [fire trap](#) and burns to ashes.
- **ZOMBIE**: You have selected a zombie. For more details on [zombies](#) see [the corresponding section](#).
- **GHOST**: You have selected a ghost. For more details on [ghosts](#) see [the corresponding section](#).

The number next to the description counts the lemmings within the space of your cursor. This helps you to count the number of lemmings in a tight group.

3) Replay Mode

Whenever you see a red **R** in this position, you are in replay mode: A previously recorded attempt is replayed precisely. To end replay mode click anywhere with your mouse or on any [hotkey](#) that does directly influences the lemmings like the [release rate changing hotkeys](#). Other [hotkeys](#) will preserve the replay mode. In particular you may [pause](#), switch to [fast forward](#) or [skip some time](#) while watching a replay.

If you wish to omit replaying all changes to [skill selections](#), this can be by an [option](#) in the [global options menu](#). If you wish that the replay mode is more permanent, you can change the [Cancel Replay on Cancel Key option](#) in the [global options menu](#).

Regardless of the chosen options, replay mode is always ended after performing the last recorded action.

4) Hatch Count

This number indicates the number of lemming that will still drop out of the hatches.

5) Lemming Count

Here you see the total number of lemming available to you. This includes all lemmings somewhere on the level screen and all lemmings sill in the hatch.

As on the preview screen, the save requirement may exceed this number, even at the beginning of the level. The reason is that [cloners](#) are not yet included in the lemming count, and so increase this number.

6) Current Save Requirement

Here the difference between the absolute number of lemmings to be saved and the number of already saved lemmings is displayed. In other words, here you can see the number of lemmings that still have to reach the exit. If the number is negative, you do not yet have save enough lemmings to solve the level. Once you reached zero, you passed the level. When positive numbers are displayed, you exceeded expectations.

7) Time

Depending on the level this has two functions.

- **STOPWATCH:** The time counts up and measures how long you take to solve the level.
- **HOURGLASS:** This level has a fixed time limit! It starts with a fixed amount of time, which counts down. One it reaches zero, the level is over.



8) Decrease Release Rate

The number on top of this button cannot be changed, because it shows the minimal release rate available on the level.

If the actual release rate as shown above the [increase release rate button](#) is higher then the minimal one, left-clicking on the decrease release rate button reduces the release rate by 1. If you right-click on this button, the release rate jumps to the minimal value.

9) Increase Release Rate

The number displayed on this button gives, as just mentioned above, the current release rate.

Left-clicking on this button increases the release rate and right-clicking makes the release rate jump to its maximum 99.

10) Skillbar

Here you can see a list of the skills available to you on this level. This picture indicates the [type of skill](#) and the number above it shows how many times you may use this skill.

The white frame around one of the skills indicates the currently selected skill. If you click on a lemming, precisely this skill will be assigned to him.

11) Pause

This button pauses the game, giving you some time to think about your next move. If you want to continue just press this button again or the corresponding [pause hotkey](#).

12) Nuke

Horrible: A button for mass murder! Fortunately you have to double-click on this button to activate it. But then a small number appears on each lemmings' head counting down from five. After five seconds every lemmings kills himself by exploding.

13) Minimap

In the minimal you can see a rough sketch of the whole level. The green pixels correspond to lemmings, while the other colored pixels are terrain pieces. The white rectangle gives you the position of the [part of the level shown on the screen](#). If you click on the minimap, you will instantly jump to the corresponding place in the level.

Warning: The minimap does not display all the level, when it spans more than one screen vertically.

3.4 Skills

Walker

Walkers have several different effects depending on the circumstances. If you assign a walker to a lemming simply walking on the ground, then he will turn around instantly. If you assign a walker to a [builder](#), [platformer](#), [stacker](#), [basher](#), [miner](#) or [digger](#), the lemming will just stop their current work. They will not turn around in this case. The same goes for [blockers](#): You can release them by assigning the walker skill to them. Again they will not turn around, but continue in the direction they faced before you interrupted them by turning them into a [blocker](#).

Walkers cannot be assigned to any falling or [swimming lemming](#).



Climber

Usually lemmings can only make steps up to 6 pixels high. But you will soon encounter much larger obstacles. Then it is time for a lemming climbing vertical walls. However even the slightest overhang will be too much for such a lemming and he will fall down again. Only very low overhangs up to 6 pixels above the ground are ignored.

The climber skill is permanent. This means that once you give this skill to a lemming, he will be a climber for the rest of the level and tries to climb every wall he encounters. There is no way to remove this skill from the lemming again.



Swimmer

If a lemmings faces [water](#), let us hope you have swimmers. A swimmer will jump into the [water](#) and instead of drowning, paddle towards the far shore. If the coast there is too steep and he is no [climber](#), he will turn around. You may assign swimmers to lemmings already drowning in [water](#).

While swimming, a lemmings can only be assigned any permanent skill, the [stoner skill](#) and the [bomber skill](#). Be aware that you cannot assign [walkers](#) to swimmers to turn



them around.

The swimmer is a permanent skill.

Floater

A normal lemming may only fall down 63 pixels - any more than that and the drop kills him. This is not true for a floater. After a short drop he will unfold his parachute and slowly drift vertically down until reaching the bottom.

As for the [climber skill](#), floaters are permanent. A lemming may not be both a floater and a [glider](#).



Glider

Gliders are very similar to [floaters](#). There are only two differences: A glider will not move vertically but glide diagonally downwards in the direction he is facing. If he hits a wall or a blocker while doing so, he will just turn around and continue gliding. The second difference concerns the behavior at [updrafts](#). See the [corresponding section](#) for details.

Gliders are permanent skills. A lemming may not be both a [floater](#) and a glider.



Disarmer

Finally there is the disarmer: The bane of traps. Whenever such a lemming encounters a [discrete trap](#), instead of killing him, he will disarm the trap making it safe for every other lemming to pass by. The trap itself will not look different after disarming it, so you have to remember for yourself which traps are already safe and which are not. [Continuous traps](#) are still lethal even for disarmers.

Note that a [discrete trap](#) will no longer work once a disarmer has *begun* his work. You do not have to wait until he finishes. However there is no possibility to stop the disarmer while working on a trap.

The disarmer is a permanent skill.

Warning: To disarm a trap, the disarmer has to be a walker when encountering the trap. If he is occupied otherwise, e.g. by [climbing](#) or [platforming](#), the trap will trigger and kill your disarmer.

Moreover a trap may only be disarmed if it is currently inactive. If the trap is busy killing another lemming, the disarmer will simply walk past ignoring the trap like any other lemming.



Bomber

Death is a constant danger for lemmings, because even on the most peaceful landscape he cannot be safe. Any time there could come the order from the player to blow himself up - instantly and without any grace period! A bomber leaves a vaguely egg-shaped hole in the terrain as a legacy.



Stoner

The stoner is very similar to the [bomber](#): The lemming will instantly commit suicide. But instead of leaving a hole in the terrain, he will transform his body into terrain other lemmings can walk upon.

There is almost no situation, where you cannot assign this skill to a lemming: It works while falling through the air, while [climbing](#) a wall, while [swimming](#) in water and while [blocking](#) other lemmings.



Blocker

If you assign a blocker to a lemming, he will stop whatever he was currently doing and will stand still. Any other lemming meeting him will be turned around as if the blocker was just a wall.

There are only few skills you can assign to a blocker apart from permanent skills: A [walker](#) cancels the blocker assignment, while [bombers](#) and [stoners](#) have the usual effect. If you want to free a blocker without assigning the [walker skill](#), the only possibility you have is removing the terrain the blocker is standing on.



Platformer

A platformer is very similar to a [builder](#). The lemming will again receive a bag of bricks, but instead of producing a stair, he will place them in a perfectly horizontal line. Compared to the builder he will bridge farther gaps and will not stop his work as long as at least two pixels of air are above him.

Note that a platformer places his bricks one pixel lower than his feet level. So you cannot assign this skill on a perfectly horizontal platform.



Builder

Is there a gap in front of you or a step in the terrain slightly too high? Then the builder is the ideal solution! He places 12 bricks in the form of a staircase.

If a builder meets a [blocker](#), then he will just turn around and keep placing his remaining bricks. This is however not the case if he meets terrain: Hitting the terrain in front of him or bumping his head at the ceiling disturbs the builder so much that he drops his sack of bricks, turns around and walks away.

The builder is nevertheless one of the most powerful and versatile skills you will find.



Stacker

The stacker is another terrain creating skill. This time the lemming gets only 8 bricks and places them in a vertical stack. If just in front of him there is some air one pixel below his feet level, he will start by placing the first pixel there and hence create a wall that is 7 pixels high. Otherwise he will start placing the first brick one pixel higher and create a 8 pixel high wall.



Basher

If you face an obstacle and cannot go over it, cannot go under it, then you have to go through it! So it is time for the basher, who creates a horizontal tunnel for as long as he finds terrain in front of him. A basher may step up a pixel or fall down two pixels and continue to work. But falling down any more pixels is a sure sign for the lemming that his efforts are no longer needed.



Miner

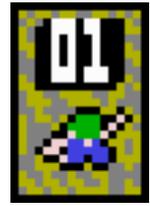
The general behavior of the miner is very similar to that of the [basher](#). There is just one big difference: The tunnel created by the miner is not horizontal but goes slightly down. If a miner meets a [blocker](#), he will turn around but continue his work.

A miner is a very powerful skill, as it has far more uses than just getting lemmings down through some terrain. Lemmings may turn around in a miner tunnel, a miner may path the way for other lemming to walk upwards in the other direction,... just be creative!



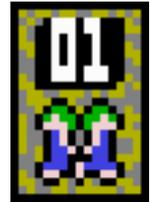
Digger

The digger is the third terrain removal skill and creates a vertical hole 9 pixels wide. He will not stop digging until there is no more terrain among the 7 central pixels directly below him. Note that [steel pixels](#) do not count for this.



Cloner

A Cloner creates a new lemming, at the same place as the old lemming, but facing in the other direction. All properties of the old lemming are copied exactly. So if the original lemming is a [climber](#), so will be the cloned lemming. If the original lemming is a [disarmer](#), so will be the cloned one. If the original lemming is a [builder](#) who can still place 5 bricks, then the cloned lemming will be a [builder](#) as well and may place 5 bricks, too. If the original lemming is a [miner](#), then the cloned lemming will start to mine in the other direction.



3.5 Hotkeys

There are a lot more options you have while playing than there are buttons in the task line. These are triggered via hotkeys. NeoLemmix comes with a set of suggested hotkeys, which are listed here as well. Nevertheless you can change them freely. Please refer to the [Configure Hotkeys paragraph](#) in the [options section](#) how to do this.

Select Skill: Walker (Hotkey 3)

This selects the [walker skill](#), if this skill is available in the level. The effect is the same as clicking on the [walker skill](#) in the [skillbar](#).

Select Skill: Climber (Hotkey F3)

This selects the [climber skill](#), if this skill is available in the level. The effect is the same as clicking on the [climber skill](#) in the [skillbar](#).

Select Skill: Swimmer (Hotkey 4)

This selects the [swimmer skill](#), if this skill is available in the level. The effect is the same as clicking on the [swimmer skill](#) in the [skillbar](#).

Select Skill: Floater (Hotkey F4)

This selects the [floater skill](#), if this skill is available in the level. The effect is the same as clicking on the [floater skill](#) in the [skillbar](#).

Select Skill: Glider (Hotkey 5)

This selects the [glider skill](#), if this skill is available in the level. The effect is the same as clicking on the [glider skill](#) in the [skillbar](#).

Select Skill: Disarmer (Hotkey 6)

This selects the [disarmer skill](#), if this skill is available in the level. The effect is the same as clicking on the [disarmer skill](#) in the [skillbar](#).

Select Skill: Bomber (Hotkey F5)

This selects the [bomber skill](#), if this skill is available in the level. The effect is the same as clicking on the [bomber skill](#) in the [skillbar](#).

Select Skill: Stoner (Hotkey 7)

This selects the [stoner skill](#), if this skill is available in the level. The effect is the same as clicking on the [stoner skill](#) in the [skillbar](#).

Select Skill: Blocker (Hotkey F6)

This selects the [blocker skill](#), if this skill is available in the level. The effect is the same as clicking on the [blocker skill](#) in the [skillbar](#).

Select Skill: Platformer (Hotkey 8)

This selects the [platformer skill](#), if this skill is available in the level. The effect is the same as clicking on the [platformer skill](#) in the [skillbar](#).

Select Skill: Builder (Hotkey F7)

This selects the [builder skill](#), if this skill is available in the level. The effect is the same as clicking on the [builder skill](#) in the [skillbar](#).

Select Skill: Stacker (Hotkey 9)

This selects the [stacker skill](#), if this skill is available in the level. The effect is the same as clicking on the [stacker skill](#) in the [skillbar](#).

Select Skill: Basher (Hotkey F8)

This selects the [basher skill](#), if this skill is available in the level. The effect is the same as clicking on the [basher skill](#) in the [skillbar](#).

Select Skill: Miner (Hotkey F9)

This selects the [miner skill](#), if this skill is available in the level. The effect is the same as clicking on the [miner skill](#) in the [skillbar](#).

Select Skill: Digger (Hotkey F10)

This selects the [digger skill](#), if this skill is available in the level. The effect is the same as clicking on the [digger skill](#) in the [skillbar](#).

Select Skill: Cloner (Hotkey 0)

This selects the [cloner skill](#), if this skill is available in the level. The effect is the same as clicking on the [cloner skill](#) in the [skillbar](#).

Next Skill (Hotkey X)

With this hotkey you can select the next skill displayed on the [skillbar](#).

Previous Skill (Hotkey Z)

With this hotkey you can select the previous skill displayed on the [skillbar](#).

Decrease Release Rate (Hotkey F1)

This hotkey decreases the [release rate](#) delaying the appearance of the next lemming. The effect is the same as clicking on the [release rate decrease button](#).

Increase Release Rate (Hotkey F2)

The complement of the [release rate decrease hotkey](#) increases the speed new lemmings fall out of the hatch. The effect is the same as clicking on the [release rate increase button](#).

Directional Select Right (Hotkey Right Arrow)

If you press this hotkey, your mouse cursor will ignore all lemmings facing left and all skills will be assigned to right-facing lemmings. This is very useful in selecting the correct lemming in a tightly packed group of lemmings.

This hotkey can be used in combination with the [Select Walker hotkey](#) or the [Select Unused Lemming hotkey](#) to combine their effects.

Directional Select Left (Hotkey Left Arrow)

This is the counterpart to [Directional Select Right](#): It selects only lemmings facing left and ignores all other lemmings.

This hotkey can be used in combination with the [Select Walker hotkey](#) or the [Select Unused Lemming hotkey](#) to combine their effects.

Select Walker (Hotkey Ctrl)

This hotkey forces the cursor to select only walkers, while ignoring all lemmings that have skills. This includes any non-permanent skills (like [builder](#) or [digger](#)), but permanent skills (like [climbers](#) or [floaters](#)) only if they are currently used by the lemming.

This hotkey can be used in combination with the [Directional select hotkeys](#) or the [Select Unused Lemming hotkey](#) to combine their effects.

Select Unused Lemming (Hotkey Shift)

While pressing this hotkey, your cursor only selects lemmings that never before had any skills (whether permanent or non-permanent) assigned to them. All other lemmings are ignored.

This hotkey can be used in combination with the [Directional select hotkeys](#) or the [Select Walker hotkey](#) to combine their effects.

Highlight Lemming (Hotkey Right-Click)

A highlighted lemming can be recognized by a small arrow above his head. If you click now on any [skill](#) in the [skillbar](#) while pressing the Highlight Lemming hotkey, this [skill](#) be automatically given to the highlighted lemming.

Depending on the [One-Click Highlightning option](#) in the [global options menu](#), there are small differences in how to highlight a given lemming.

Show Athlete Info (Hotkey Alt)

Select a lemming while pressing this hotkey. Instead of the usual "WALKER 1" in the toolbar you will see something like this:



This tells you precisely what permanent skills the lemming has. The symbol "-" tells you that the lemming does not have the respective skill.

- 1st letter "C": This lemmings is a [climber](#).
- 2nd letter "S": This lemmings is a [swimmer](#).

- 3rd letter "F": This lemmings is a [floater](#).
- 3rd letter "G": This lemmings is a [glider](#).
- 4th letter "D": This lemmings is a [disarmer](#).
- 5th letter "G": This lemmings is a [ghost](#).
- 5th letter "Z": This lemmings is a [zombie](#).

Remark: If a [zombie](#) or [ghost](#) has permanent skills, this additional information is displayed automatically.

Pause (Hotkey P or F11 or Middle-Click)

This pauses the game and has the effect is the same as clicking on the [pause button](#).

Fast Forward (Hotkey F)

After pressing this hotkey the game runs four times as fast. You can still assign skills to lemmings and do any other action. To end fast forward, hit the same hotkey again, [pause](#) the game or [skip some time](#) either [forwards](#) or [backwards](#).

Time Skip: Forward 1 frame (Hotkey N of Left Click)

If you want to assign a skill at a precise position, this hotkey is your friend. [Pause](#) first (or you will not see anything), then hit this hotkey: The game progresses precisely one frame, the quantum of game-time, without turning [pause](#) off.

Remark: If you are in [replay mode](#), then a keyboard hotkey will preserve this, but left-click with your mouse will exit [replay mode](#).

Time Skip: Forward 85 frames (Hotkey Point)

If you do not care to wait and watch your lemmings, you can jump 85 frames or equivalently 5 seconds into the future with this hotkey. During this time, lemmings may reach the exit, continue working on their tasks or die various deaths. All this is simulated internally and the result displayed to you.

Time Skip: Forward 170 frames (Hotkey Space)

This does precisely the same thing as the [previous hotkey](#), but jumps 170 frames or equivalently 10 seconds into the future.

Time Skip: Back 1 frame (Hotkey B)

If you missed the place to assign a skill by half a second, then this hotkey will help. Again you need to [pause](#) the game first, because the game will go back just one frame, undoing all changes you made during the last frame.

Warning: If you have [paused](#) and assigned any [skill](#), then the game progresses automatically one frame. So if you want to undo your skill assignment you have to go back *two* frames. This is important to remember, because after going back one frame, the game will display the lemming without the skill applied, but nevertheless remembers that you assigned the skill. So when going to the next frame, the game will automatically assign your skill again.

Time Skip: Back 17 frames (Hotkey Minus)

This hotkey returns to the point 17 frames or equivalently 1 second ago.

Time Skip: Back 85 frames (Hotkey Comma)

This hotkey returns to the point 85 frames or equivalently 5 seconds ago.

Restart (Hotkey R)

This hotkey stops the current attempt and starts the level anew. It also enters [replay mode](#) and repeats your actions from the previous attempt precisely. Stop [replay mode](#) whenever you want to change something in your solution.

Save Replay (Hotkey U)

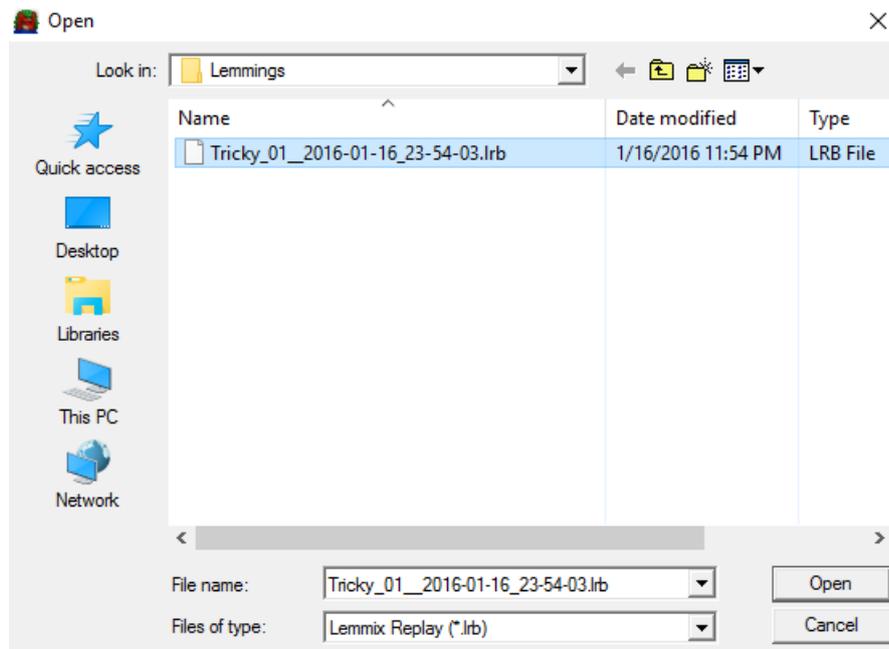
With this hotkey you can save a replay of your current solution. Depending on the [replay naming option](#) chosen you might be asked to enter a file name for the replay.

Note that you can still save a replay while on the [result screen](#) using the same hotkey.

NeoLemmings automatic creates a subdirectory called `Replays`. If you play a single level, the replay is stored directly in this directory. If you play a level in a level pack, then NeoLemmings will create a subsubdirectory in `Replays/[Level Pack Name]` and save your replay there.

Load Replay (Hotkey L)

This will open a window where you select the replay you wish to see. Once you selected your replay, the level starts anew in [replay mode](#) repeating exactly the saved solution exactly.



Remark: If you ignore the warning message, you may load a replay from a completely different level for the current one. The game still tries to make sense of the replay and something *will* happen. Just do not expect any sensible actions.

Save State (Hotkey Enter)

This internally saves the current state of the level, to be loaded later on with the [Load State hotkey](#). This is useful if you have partially solved the level and are not sure how to proceed. Then this feature allows you to easily access your current position.

Once you quit the level, i.e. enter the results screen, the save state is deleted and lost to you. Moreover there is no way for you to access the save state out of the game, in particular it does not save any replay. There is only one save slot available. So hitting the Save State hotkey a second time will delete the old save state and replace it with the current one.

Load State (Hotkey Backspace)

If you have a [save state](#), then you may go back to this position by hitting the Load State hotkey. It enters [replay mode](#) and replays your current attempt from there on (if you let it).

Cancel Replay (Hotkey C)

Usually any mouse click will cancel replay mode, but there is nevertheless a specific hotkey for this function as well.

Remark: This hotkey was mainly added for people using the ["Only Cancel Replay on Cancel Key" option](#).

Save Image (Hotkey I)

This saves an image of the current state of the whole level, i.e. not only the part you are currently seeing. It includes all lemmings and all their work, but does not show the toolbar or your cursor. You will be asked to enter a name for the image file. The file type is .png.

Toggle Music (Hotkey M)

With this hotkey you can turn the music on or off. This has the same effect as changing the music setting in the [options menu](#).

Toggle Sound (Hotkey S)

This is very similar to the [Toggle Music hotkey](#): It turns the sound-effects on or off. This has the same effect as changing the sound setting in the [options menu](#).

Cheat Level (Hotkey 1)

This hotkey requires that either [all levels are unlocked](#) by the level pack designer or that you entered [cheat mode](#) yourself. Then you may skip this level with this hotkey, showing you first a successful [result screen](#) from where you can go to the next level.

Nuke (Hotkey F12)

The effect is the same as clicking on the [nuke button](#), commanding every single lemming to commit suicide in five seconds. Just as the [nuke button](#), this hotkey has to be double-pressed.

Quit (Hotkey Esc)

This instantly quits the level and the results screen is displayed. It is faster than [nuking](#) all lemmings.

Release Mouse (Hotkey ~)

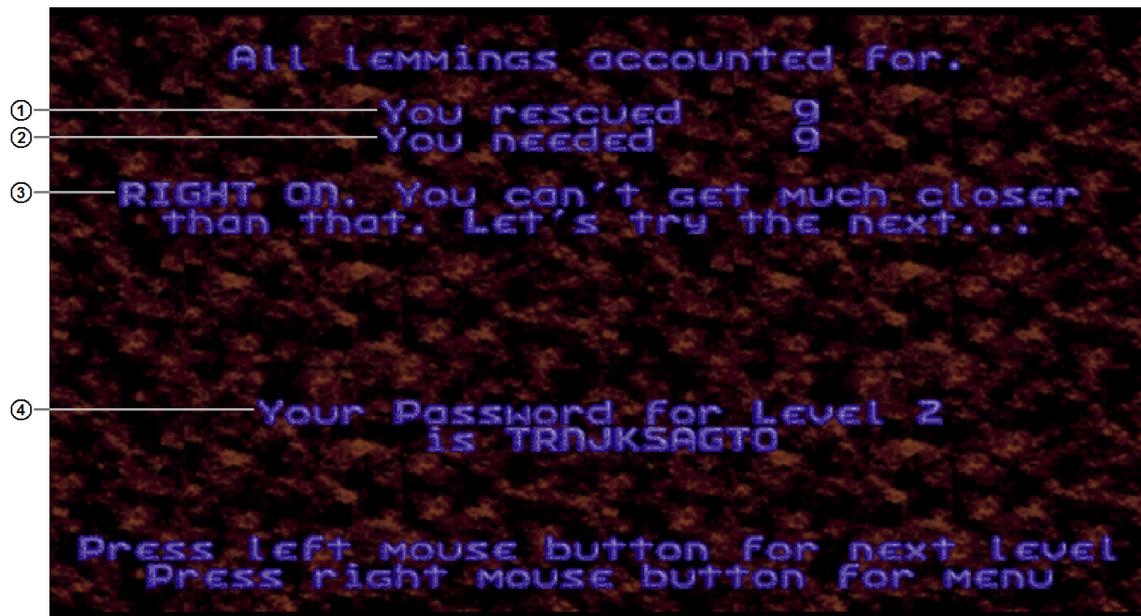
Usually the mouse is bound within the game screen and cannot leave it. By pressing this hotkey you can "free" the mouse until you click again on the game screen.

3.6 Result Screen

After the level ended, this screen presents the results to you.

1) Saved Lemmings

Here you can see the number of lemmings that reached the exit.



2) Save Requirement

This reminds you of the number of lemmings, you have to save in order to solve the level. It is the [same number](#) that was already displayed on the [preview screen](#).

3) Comment

NeoLemmix dares to comment on your performance here.

4) Password

If you solved this level, the [password](#) for the next level is displayed here. There are only rare occurrences, where [passwords](#) are useful. Please refer to the [password section](#) for details.

Hotkeys

As for the [preview screen](#) there are a few hotkeys that can be used here. In level packs they are:

- Enter or left-click: If you solved the level, this moves on to the [preview screen](#) of the next level. Otherwise it will return to the [preview screen](#) of the current level.
- [Save Replay hotkey](#) (default hotkey U): This saves the replay of your solution, whether successful or not. Note that when failing a level and restarting it, the game remembers your previous attempt and replays it.
- Esc or right-click: This returns to the main menu.

Note that except for the [Save Replay hotkey](#), none of the hotkeys can be customized in the [options menu](#).

If you have loaded a single level, you have essentially the same options:

- Enter or Left-Click: This returns to the [preview screen](#) of this level.
- [Save Replay hotkey](#) (default hotkey U): This saves the replay of your solution, whether successful or not.
- Esc or Right-Click: This exits the whole game.

Postview text

Sometimes some more text is displayed directly after ending the level. Just hit Enter or left-click to go to the proper result screen. If you hit Esc, you return to the [main menu](#).

4 Level components

4.1 Hatch and Exit

The hatch is place where lemmings appear. Lemmings appearing there may face either right or left, depending on the option the level designer chose. There may be more than one hatch in a level. Then the game cycles through all hatches and spawns lemmings consecutively from the different hatches.

Note that the [release rate](#) applies to the whole level and not to each single hatch. E.g. if there are two hatches and the [release rate](#) is set to 1, then the second lemming appears out of the second hatch three seconds after the first lemming appears in the first hatch. The third lemming will again drop out of the first hatch after another three seconds, so creating twice the usual distance between lemmings from one hatch.



The exit is the place the lemmings have to reach. Again there may be more than one exit in a level. Then it is your choice, which exit to use.

Remark: Lemmings usually have to stand on solid terrain to be able to exit. Falling past the exit is not sufficient, though [floaters](#), [gliders](#) and lemmings on the verge of [exploding](#) or [stoning](#) may jump directly into the exit.



4.2 Terrain

Most of the level is terrain: Solid pixels the lemmings can walk on. You have [skills](#) that either create terrain like the [builder](#) or the [stoner](#), or remove terrain like the [basher](#) or the [bomber](#).

4.3 Steel

Steel are solid terrain pixels that are indestructible. They cannot be influenced by any terrain removal [skill](#). There is also no possibility to add steel parts while playing a level.



4.4 Traps and Water

Water

Water is a summary term for any "liquid" you might find at the bottom of the level. Game-wise there is no difference between actual water, a brownish bubbling soup, some ugly green acid, some vines or even a lava pit. As lemmings cannot [swim](#) without being given the [respective skill](#), they will just drown. Getting wet feet will not yet kill the lemming, but anything more does.



Continuous Traps

Such traps work essentially in the same way as [water](#), but without the possibility of [swimming](#) in it. Any lemming coming too close to the trap will be instantly killed. There is no way to bypass the trap except for going around it. [Disarmers](#) cannot [disarm](#) such traps and will be killed by them. You can distinguish them from [discrete traps](#) by their constant animation.



Discrete Traps

Some traps stay dormant for most of the time. Only when a lemming enters a specific area, they get active and smash the lemming. This takes some time, so for a short while lemmings may pass the trap without being harmed. Only after the animation has finished, other lemmings can be killed. These traps can be [disarmed](#) by the [disarmer](#) skill.



Single-Use Traps

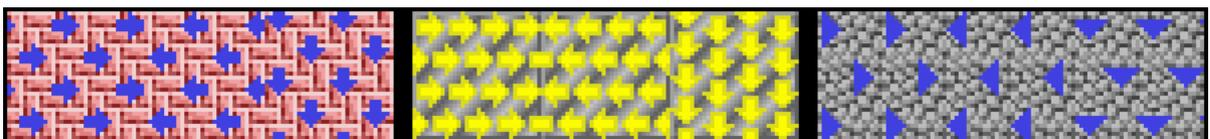
NeoLemmings also features the possibility to have traps that kill a single lemming and are totally harmless afterwards. Currently they are almost never used.

[Disarmers](#) can turn such traps harmless as well.

4.5 One-Way-Walls

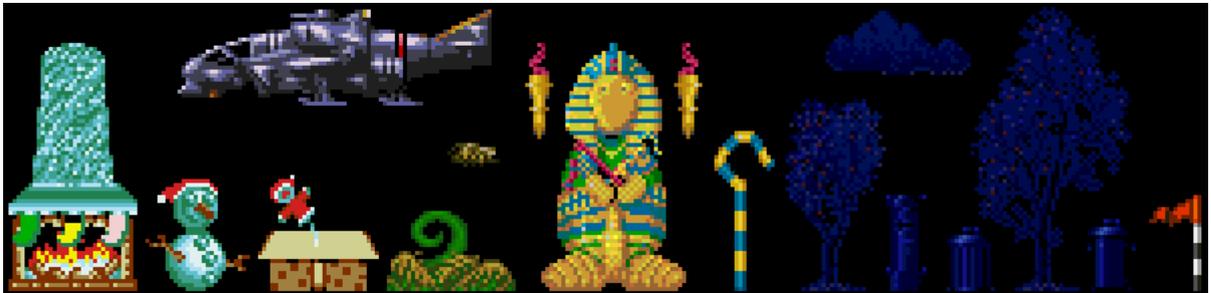
One-way-walls restrict the possibilities to remove this part of terrain and are indicated by arrows placed upon the terrain. They come in three kinds: Left-facing, right-facing and down-facing one-way-walls.

- Right-facing one-way-wall: Lemmings cannot [bash](#) or [mine](#) this coming from the right. All other [skills](#) work normally.
- Left-facing one-way-wall: Lemmings cannot [bash](#) or [mine](#) this coming from the left. All other [skills](#) work normally.
- Down-facing one-way-wall: Lemmings cannot [bash](#) this part at all. All other [skills](#) work normally.



4.6 Decoration Objects

Weird, but true: There are objects placed in your way that look like terrain, but are not solid; that look like traps, but do not do anything. Though placed in the level to decorate it a bit, they likely will only confuse you.



5 Passwords and Cheat Mode

This section is only relevant when playing a level pack consisting of many levels. It explains what to do if you do not want to skip a level or just play them in a totally different order than the intended one.

5.1 Password Menu

To enter the Password Menu, click on the second button in the [Main Menu](#) or press the key F2 there. If you wish to return to the main menu, press Esc.



This menu is very simple. In the middle you see 10 dots where you can enter [passwords](#) or other [level codes](#).

At the bottom you may find the words [All Levels Unlocked](#) or [Cheat Mode](#). They indicate that you may access any level in the level pack, by entering shorter versions of the passwords. Please see the [corresponding section](#) for details.

5.2 Password System

Every level has a password consisting of 10 letters. You are told the password of a level on the [results screen](#) of the previous level. To use passwords, go to the [password menu](#) and type them in there. If it is correct, you will briefly see the rank name and level number of the level you selected, before you go to the [preview screen](#) of said level. If you have mistyped it, you will receive a short error message before you can try again.

Remark: You will very likely never need any of the passwords. Many level packs let you choose to play any levels right from the beginning and for the others the game will remember which levels you already solved and can therefore access. So the main use of the password system is to give friends access to specific levels.

5.3 Unlocked Levels and Cheat Mode

There is almost no difference between Unlocked Levels and Cheat Mode. The first is enabled right from the start if the level pack designer so chooses, while Cheat Mode requires that you enter a specific password in the [password menu](#).

Both of them allow you to do the following:

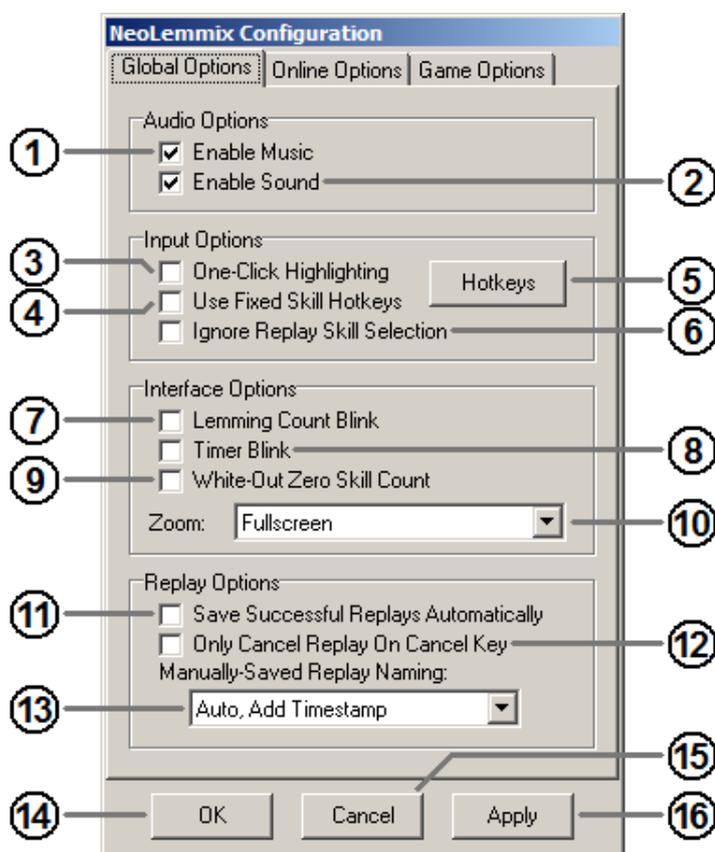
- You can use the [cheat hotkey](#) and skip a level while on the [level screen](#).

- You can jump to any level directly by entering the rank name followed by the level number in the [password menu](#), e.g. `MECHANICS2` would load the second level in the Mechanics rank.
Warning: This does only work if the resulting string is no longer than the 10 letters available for a usual password. So level 10 in the Mechanics rank cannot be accessed this way, because `MECHANICS10` is 11 letters long.
Warning: The game checks your rank name with the internally saved rank name, which may or may not be what is displayed on the main menu.
- Instead of entering the rank name and the level number, you can enter as well the rank number and level number. Here the rank number must contain two digits, so usually you have to add a leading zero here. For example `023` would get you to the third level in the second rank. The password `02003` works as well and gets you to the same level, but if you type in `23`, the game will complain that this is an incorrect code.

6 Options

You can get to the options menu by pressing the [Options button](#) on the [main menu](#) or by pressing the key F3 there. To return to the [main menu](#), press the ESC key.

6.1 Global Options



1) Enable Music

If this box is checked, the game plays music on the [level screen](#), otherwise not.

2) Enable Sound

Here you can choose whether or not to hear sound effects like [builders](#) placing their last bricks, lemmings jumping into the [exit](#) of splatting on the ground after a high fall.

3) One-Click Highlighting

This option only makes a difference, if one of the mouse buttons is used for the [Highlight Lemming hotkey](#). If checked, then place your cursor on the lemming and click your hotkey mouse-button to highlight the lemming. If disabled, then leave your hotkey mouse-button pressed, move your cursor over the lemming and left-click as you want to assign a [skill](#).

If you have a keyboard key as the [Highlight Lemming hotkey](#), you always have to press this key while left-clicking on the desired lemming.

4) Fixed Skill Keys

Remark: This option is outdated since the addition of [configurable hotkeys](#).

Nevertheless here a description what checking this does: The left-most skill on your [skillbar](#) can now be selected by the [Select Climber hotkey](#), regardless what skill is actually displayed there. For other skills on the [skillbar](#), the hotkeys are: [Select Floater](#), [Select Bomber](#), [Select Blocker](#), [Select Builder](#), [Select Basher](#), [Select Miner](#) and [Select Digger](#). All other hotkeys to [select skills](#) will not work at all.

5) Hotkeys

This opens a new screen, where you can set your preferred [hotkeys](#). Please refer to the [Hotkey Option section](#) for a detailed description of this option.

6) Ignore Replay Skill Selection

In a [replay](#) all [skill selections](#) are remembered. This option determines whether such selections should be [replayed](#) as well. If this option is checked, then [skill selections](#) are ignored, while if disabled the [selections](#) are actually performed.

7) Lemming Count Blink

The game can check itself, whether there are still enough lemmings around to meet the save requirements. In mathematical terms, it checks whether

$$\begin{aligned} \#\{\text{lemmings on the screen}\} + \#\{\text{lemmings in hatch}\} + \#\{\text{cloner skills}\} &\geq \\ &\geq \#\{\text{save requirement}\} - \#\{\text{saved lemmings}\} \end{aligned}$$

If this option is turned on, then the [number of available lemmings](#) displayed in the toolbar on the [level screen](#) will start to blink once there are no longer enough lemmings available to solve the level.

8) Timer Blink

The game may alert you in levels with a [time limit](#), that you are short of time. If turned on, the [time](#) displayed in the toolbar will blink during the last 30 seconds.

9) White-Out Zero Skill Count

Usually NeoLemmix displays "0" in the [skillbar](#) if you have used up all your [skills](#). Once this option is checked, the game will remove the "0" and leave this place white.

10) Fullscreen mode

Here you can switch between a fullscreen mode and several different window modes.

- Fullscreen: The game runs fullscreen.
- Windowed, n_x Zoom: The game runs in a $320n \times 200n$ -pixel window.

How many zoom options for the window are displayed depends on your screen's resolution. So e.g. for a resolution of 1366×768 you may select a $3x$ zoom resulting in a 960×600 -pixel window, while for a resolution of 1920×1080 even a zoom factor of 5, i.e. a 1600×1000 -pixel window is available.

11) Save Successful Replays Automatically

Here you can choose whether the game should automatically save all your successful attempts as replays or not. Such replays are saved in a subdirectory `Auto` within the replay folder. Regardless of the option set in [Automatic Replay Names](#), automatic replays will always follow the naming scheme for [manually saved replays with added timestamp](#), i.e. with date and time appended.

12) Only Cancel Replay on Cancel Key

Turning this option on will require you to hit the [Cancel Replay hotkey](#) if you want to leave replay mode. In particular you may no longer assign skills to lemmings while in replay mode.

Warning: Given that the game enters replay mode very often, enabling this option may get annoying soon.

13) Automatic Replay Names

This option determines how your replay files will be named. This option does not affect the file names of [automatically saved replays](#).

- Auto, Overwrite Old Files: This chooses the file name and file location automatically for you. If you played a level in a level pack, the file name of the replay will be

[RANK NAME]_[LEVEL NUMBER].lrb

If you played a single level, the file name will be

[LEVEL TITLE].lrb

Warning: If there is already a replay of the same name in your directory, it will be automatically overwritten. No questions asked.

- Auto, Confirm Overwrite: This is almost the same setting as "Auto, Overwrite Old Files". But instead of automatically overwriting existing replays, it will ask you whether you really want to overwrite the old replay or rather enter an alternative file name yourself.
- Auto, Add Timestamp: Again the file name and file location are chosen automatically for you. But now the file name for a level in a level pack will contain a time-stamp in the form

[RANK NAME]_[LEVEL NUMBER]__[DATE YYYY-MM-DD]_[TIME HH-MM-SS].lrb

or in the case of a single level

[LEVEL TITLE]__[DATE YYYY-MM-DD]_[TIME HH-MM-SS].lrb

Unless you save two replays within one second, this ensures that no replay will ever be overwritten.

- Ask For Filename: The game will ask you each time how to name the replay and where to save it. The suggested name is the same as for the first setting.

14) OK

This saves all options and returns to the [main menu](#).

15) Cancel

This returns to the [main menu](#) without saving the changes you made in the options menu.

16) Apply

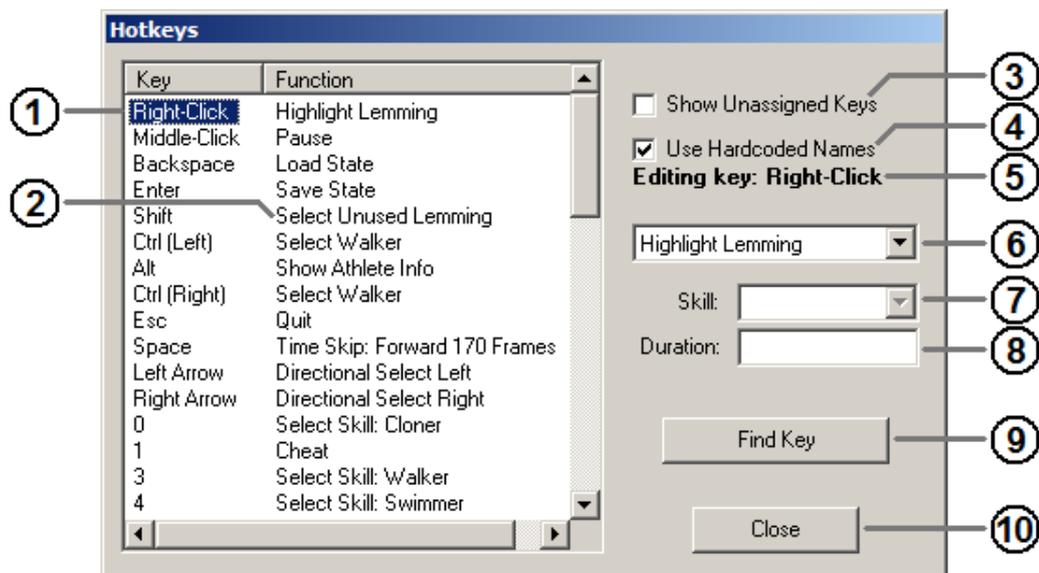
This saves all options, but does not return to the [main menu](#).

6.2 Hotkey Options

This is the place, where you can customize all the different [hotkeys](#).

1) Key

Here all the keys are listed. Click on them to change their function.



2) Function

Next to the [key](#) you find the currently assigned function.

3) Show Unassigned Keys

If disabled, the game lists only these keys to which a function is currently assigned. Once this box is checked, all keys appear in the list.

Remark: If enabled, the list of keys will most likely contain a lot more entries than you have keys on your keyboard. They are included for players with different keyboard layouts.

4) Use Hardcoded Names

If you are not using the US/English keyboard layout, then some keys on your keyboard will not match with the description usually displayed. In this case uncheck this option. Instead of the English description in the [key list](#), the game will now display whatever your computer returns when you enter the respective key.

5) Editing Key

If you have selected a key either via clicking on the [key list](#) or by using the [Find Key](#) option, this line will inform you again about the key you are currently editing.

6) Function Menu

If you have selected a hotkey, you are informed here about the function it has. If you like to change this function, use the drop-down menu here to select some other function.

Remark: The [Select Skill](#) and [Time Skip](#) function do need additional input; see below for details.

7) Skill:

If you have chosen [Select Skill](#) as a function for a [hotkey](#), you have to specify which [skill](#) to select. This can be done in this drop-down menu.

8) Duration:

If you have chosen [Skip Time](#) as a function for a [hotkey](#), you need to specify how much time to skip. The unit used for this is frames with one second being equal to 17 frames. If you enter a positive number, then you jump into the future, and if you enter a negative number, you revisit the past.

9) Find Key

If you are too lazy to search for a certain key in the [key list](#), you can use this function. Click on the button, click away the info displayed and then hit the key you are looking for. Then this key is automatically highlighted.

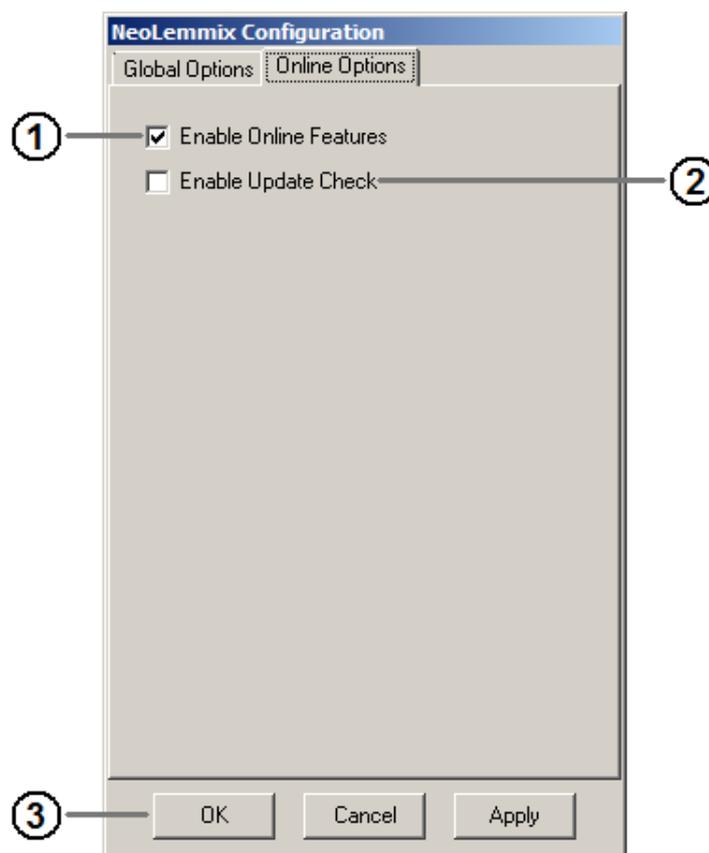
Warning: There are a few special keys, that cannot be found this way: Right-click (on mouse), middle-click (on mouse), Enter, Tab, and possibly a few more.

10) Close

This saves all [hotkey](#) assignments and returns to the [global options menu](#).

6.3 Online Options

Here you can decide how much NeoLemmix should check online.



1) Enable Online Features

If the style file of some level is missing, NeoLemmix attempts to download the appropriate style file automatically when this option is selected.

2) Enable Update Check

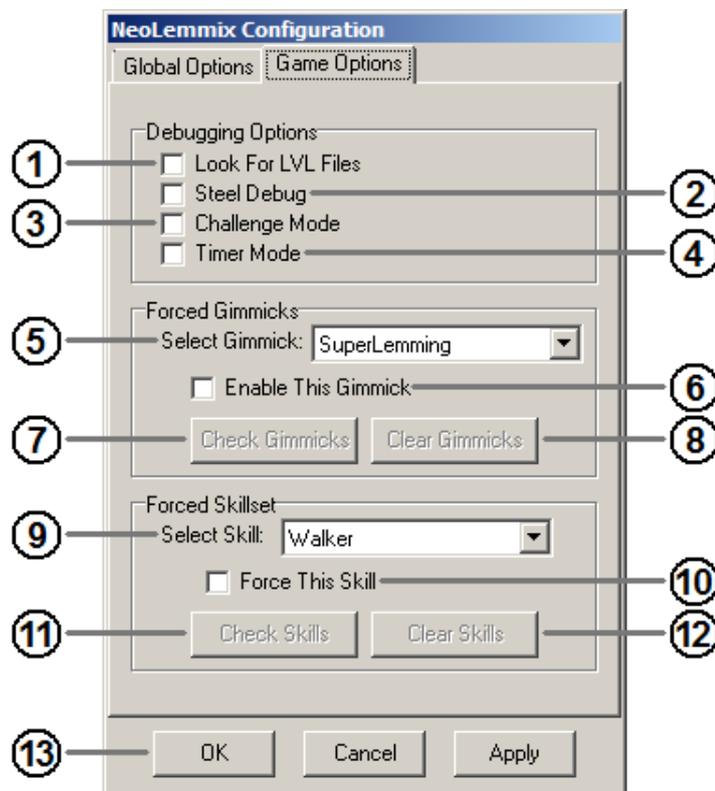
This function will check for new updates to NeoLemmix online. It will only notify you about the new versions and ask whether you want to visit the NeoLemmix homepage, but it will not download or install new versions itself.

3) OK, Cancel and Apply

Same function as in the [global options menu](#).

6.4 Game Options

Some level packs allow to set more options, which are found here. These are mostly used for testing purposes, so they are frequently disabled in finished level packs.



1) Look for LVL Files

When enabled, the game checks the directors of the level pack, whether there are single .lvl files available. These have to be named as ABB.lvl, where AA gives the rank number and BB defines a level number. So for example 0203.lvl would correspond to the third level in the second rank. If the game finds such a level file, it loads this level instead the usual one when playing the level specified by the file name of the .lvl file.

Remark: This is mostly used during the playtesting phase of a level pack, when backroute fixes and other updates are handed out as single .lvl files.

2) Steel Debug

This greatly changes the visual display of the level: The level background is now pink and any **destructible terrain** is pure white. Only objects and **steel** are displayed in their usual colors.

3) Challenge Mode

This completely ignores any skill restrictions: Instead of counting down on the [available skills](#), it starts with [zero skills](#) on the [skillbar](#) and counts upwards with every [skill](#) you use.

4) Timer Mode

This only affects levels with time limits: The given time limit is ignored and instead the time is counted up, just as with levels without time limit.

5) Select Gimmick

Here you can browse through all [gimmicks](#) available.

6) Enable This Gimmick

If this box is checked, the [currently selected gimmick](#) is used in every level.

7) Check Gimmicks

This function is only available if at least one [gimmick is enabled](#). Then it gives a list with all currently active [gimmicks](#).

8) Clear Gimmicks

Another function that is only available if at least one [gimmick is enabled](#). Then disables each and every [gimmick](#), returning to the default state.

9) Select Skill

You may browse through all [skills](#) here.

10) Force This Skill

If you check this box, then this [skill](#) will be available in all levels. If this would result in more than 8 [skills](#) in the [skillbar](#), then another skill is sacrificed.

Remark: It is strongly encouraged to use this option only when [Challenge Mode](#) is activated: How many times the selected [skill](#) is available in a level, depends on otherwise irrelevant level settings. Thus it might happen regularly, that you are given none of the forced [skill](#), even when checking this option.

11) Check Skills

If at least one [skill is forced](#), this gives a list with all currently forced [skills](#).

12) Clear Skills

As for [gimmicks](#), this disabled all forced skills.

13) OK, Cancel and Apply

Same function as in the [global options menu](#).

7 Advanced Level Components

7.1 More interactive objects

There are still a few more kinds of interactive objects found in levels than described in the [level components section](#).

Pickup-Skills

These [skills](#) are not available to you right from the beginning. You have to guide a lemming to the pickup-skill. Once the lemming reached it, the small image in the middle is erased and a skill added to your [skillbar](#). Which [skill](#) this can be seen from the image in the pickup-skill.



The [skills](#) in the picture are (from the left to right): Walker, climber, swimmer, floater, glider, Disarmer, bomber, stoner, blocker, platformer, builder, stacker, basher, miner, digger, cloner and an empty pickup-skill.

Updrafts

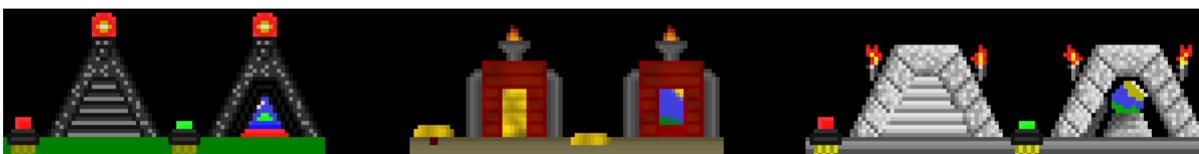
Updrafts have two functions: First of all they slow fallers and [floaters](#). This includes enlarging the maximal fall distance: Any fall above the updraft is ignored. Secondly a [glider](#) caught in an updraft will no longer glide down but upwards.



Locked Exits and Buttons

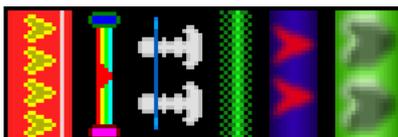
Sometimes some exits are locked at the beginning, letting no lemming enter. Then you will find at least on button in the level, which can be pressed by a lemming walking onto it. Once all buttons in the level are pressed, the exit will open and accept lemmings as usual.

In the picture you see an unpressed button, a closed exit, a pressed button and finally an open exit in three different styles.



One-Way-Fields

One-way-fields are non-solid objects that let lemmings pass in only one direction. The direction is usually indicated by some arrows or a moving vertical line. To a lemming facing the other direction they act like a [blocker](#) and turn him around. As one-way-fields are non-solid they cannot be destroyed by [terrain removal skills](#), nor can they be [climbed](#). A [builder](#) meeting them will turn around as well, but not stop working.



Splitter

Splitters are variable **One-way-fields**: They change their direction every time a lemming passes through them or is turned away.



Teleporters

These come in pairs: One teleporter and one receiver. Any lemming reaching a currently inactive teleporter will enter it and come out of the receiver again, facing in the same direction. This however takes a bit and a working teleporter may not be entered by any other lemming. Receivers are totally ignored by lemmings. Sometimes however, an object works as both a teleporter and a receiver at the same time.

Warning: There may be more than one teleporter and receiver in a level. There is no way to tell which receiver belongs to which receiver, except when the level designer put visual clues in the level to help you.



Splat Pads and Anti-Splat Pads

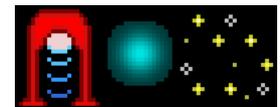
These two objects affect lemmings that land on them after falling. A splat pad will kill any landing lemmings, regardless of how far the fall was (or wasn't), unless they are floaters or gliders. It can be recognized by the squiggling red wire.



An anti-splat pad is the opposite - lemmings falling onto them will survive the fall no matter how far it was. Here the wire is a light green.

Radiation Object

When a lemming walks through one of these, a 9-second countdown will appear above his head. When the countdown runs out, the lemming will become a **bomber**.



Note that radiation objects are extremely similar to **slowfreeze objects**, both in effect and appearance. As a guideline, a doorway with waves is most likely a radiation object, but a doorway with a blue glow is a **slowfreeze object**. Yellow sparks are usually radiation objects, but blue-colored sparks tend to be **slowfreeze objects**.

Slowfreeze Object

This works precisely as the **radiation object**. The only difference is, that the lemming will become a **stoner** after the 9 seconds.



7.2 Preplaced Lemmings

Sometimes you will find lemmings already on the level screen when you start. They react like usual lemmings and count both towards the total amount of lemmings available and towards the save require-

ment.

Some levels may have only preplaced lemmings and no hatch altogether.

7.3 Preassigned Skills

NeoLemmix has the possibility that all lemmings coming out of a hatch already have one or more of the permanent skills. You do not have to spend any of your usual skills for this. All of this applies to [preplaced lemmings](#) as well.

7.4 Zombies

Zombies can be summarized as walking, contagious traps in lemming-look.

Looking like gray-skinned lemmings, they behave almost precisely like usual lemmings: They walk around and may die a thousand deaths by falling too far, drowning in [water](#) or meeting [traps](#). They will use any objects like [teleporters](#), [updrafts](#) or [one-way-fields](#). There are four main differences:



- Zombies cannot enter the exit, hence cannot be saved in the usual sense.
- You cannot assign any skills to zombies.
- Whenever a zombie touches a usual lemming, the lemming will turn into just another zombie.
- Zombies ignore any [pickup-skill](#) and [buttons for locked exits](#).

Lemmings that got turned into zombies retain their permanent skill, i.e. may [climb](#) walls, [swim in water](#) or even [disarm traps](#). Note that zombies can also have [preassigned skills](#) or that there are [hatches](#) that spawn only zombies.

7.5 Ghosts

If you see lemmings walking around that look like all color pixels on your screen have suddenly gone defect, then you see a ghost lemming. Do not be afraid of them - most of the time they are quite helpful. Their behavior can be characterized as follows:



- Ghosts cannot enter the exit, hence cannot be saved in the usual sense.
- Ghosts can be assigned any skills. **Warning:** You may assign the [swimmer](#) and the [disarmer](#) skill to ghosts. However this is a waste of skills as ghosts with these skills will still ignore [water](#) or [traps](#).
- Ghosts cannot be killed by any [trap](#) or [water](#). Ghost can die by falling down too far.
- Ghosts ignore any objects like [teleporters](#) or [pickup-skills](#). The only exception are [one-way-walls](#).
- If a ghost meets a usual walking lemming or a [zombie](#), the lemming or [zombie](#) will turn around and try to walk away from the ghost - ghosts are fearsome things. A lemming currently working will just turn around, but not stop with their work.

As for [zombies](#), ghosts can have [preassigned skills](#) and there may be [hatches](#) that spawn only ghosts.

7.6 Secret Levels

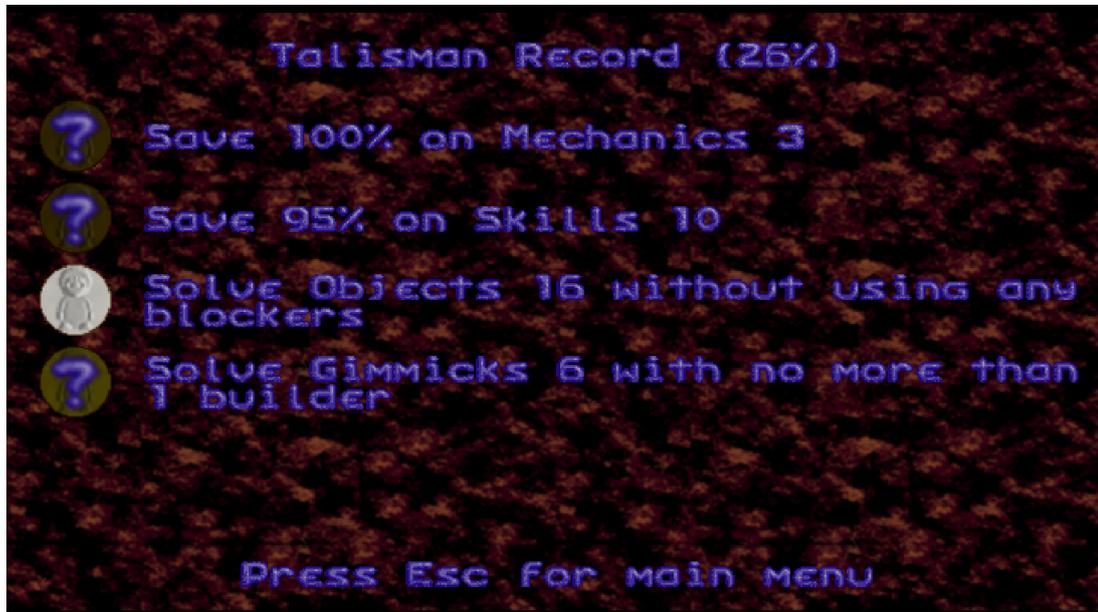
Some level designers add Easter eggs to level packs: Secret levels that cannot be reached normally. There are a few possibilities to reach them:

- An invisible trigger can be placed in a usual level. Once a lemming reaches the trigger, the current level ends and the [preview screen](#) of the secret level is shown.
- Secret levels may unlock when achieving certain [talismans](#).

- If you somehow got the password for the secret level, you may enter it in the [password menu](#). Some level packs even allow the player to access the secret level via cheat codes.

7.7 Talismans

Talismans are awarded if you solve a level in a much more challenging way than usual.



If a level pack features talismans, you will see the talisman button on the [main menu](#). You get to the talisman screen as well if you press F6 there.

On the talisman screen you see the description of various challenges. As long as you have not yet managed to solve the challenge, the image on the left next to it displays a big question mark. Once solved it displays a medal. The color indicates the difficulty of the challenge: Bronze for challenges of medium difficulty, silver for hard ones and gold for very hard challenges.

At the top a percentage value is given, telling you how many challenges you solved up to now. For this harder challenges are valued more than easy ones. To be precise, bronze talismans have weight 0.75, silver talismans have weight 1 and gold talismans have weight 1.25.

If there are more than five challenges available, you can browse the others by pressing the right or left arrow key. To return to the [main menu](#), press Esc.

7.8 Gimmicks

This is just a section to warn you that there are so-called gimmicks around: Just when you think you know the game mechanics, the gimmicks change them!

Remark: It is possible that more than one of the gimmicks is active in a level.

SuperLemming

The whole game runs three times as fast as usual.

Frenzy

This removes the ability to [pause](#) the game. Attempting to [pause](#) simply results in an "Oh No!" sound playing.

Reverse Skill Counts

This causes the [skill counts](#) to count upwards instead of downwards. Eg. if you have 20 [builders](#) and you use one, you'll now have 21 [builders](#). Once you reach 99, you can't use any more of that [skill](#).

Karoshi

This gimmick basically swaps "saving" and "killing" around. Your goal becomes to kill lemmings, not save them - essentially turning the [exit](#) into a [trap](#), and the [traps](#) into [exits](#). Almost any method of killing a lemming counts with the one exception of falling out the bottom of the level. This gimmick also disables the [nuke](#). If you're wondering why the name "Karoshi": It comes from the freeware game "Karoshi Suicide Salaryman" that inspired this gimmick.

Unalterable Terrain

This gimmick prevents the level's [terrain](#) from being removed or added to. So, for example, if you use a [basher](#), he will move through the [terrain](#), but won't leave a tunnel that other lemmings can follow. If you use a [builder](#), he will move upwards, but won't leave a bridge behind for others to walk on. For practicality purposes, a [builder](#) or [platformer](#) who runs into terrain in this gimmick will first display the shrugging animation before falling.

Overflow Skill Counts

This gimmick essentially gives infinite uses of all [skills](#). Although they will appear to count down, if they reach 0 and the player uses the [skill](#) again, it will work and the count will loop back around to 99.

No Gravity

Exactly what it says on the tin: Lemmings will not fall, and will simply walk on thin air. A downwards sloped terrain above them will cause them to come back downwards, though if they have a choice between going upwards or downwards, they'll still go upwards.

Hardworkers

This gimmick causes [builders](#) and [platformers](#) to never run out of bricks, and [bashers](#) to not stop even if there's no terrain in front of them. This doesn't mean other things cannot make them stop - a [builder](#) or [platformer](#) will still stop if they hit terrain, or a [basher](#) will still stop if he hits steel or has nothing to stand on.

If in addition the [gimmick No Gravity](#) is active, then also [miners](#) and [diggers](#) will continue working even without having any terrain.

Backwards Walkers

This gimmick makes walkers move backwards instead of forwards. They will still perform their [skills](#) in the direction they are facing, it is only walking that is affected.

Lazy Lemmings

This is basically the inverse of [Hardworkers](#). [Builders](#) and [platformers](#) only have four bricks, while [stackers](#) only have three. [Bashers](#) and [miners](#) will stop after one stroke, while [diggers](#) will stop after three.

Exhaustion

This gimmick causes lemmings using most [permanent skills](#) to tire out after a while:

- [Climbers](#) will stop climbing and fall back down, when they're just shy of the fatal fall distance.

- [Floaters](#) and [gliders](#) will only parachute respectively glide for about a second then revert to fallers and never use their skill again during this fall. This may result in the fall being fatal, though they remain capable of surviving falls a bit longer than a regular lemming could.
- [Blockers](#) will automatically revert to walkers after about 10 seconds.
- [Swimmers](#) and [disarmers](#) are not affected by this gimmick at all.

Non-Fatal Bombers

As the name suggests, this gimmick makes the [bomber skill](#) not kill the lemming. After exploding, the lemming will revert to being a walker. This extends to the [nuke](#) too, although using the [nuke](#) still stops any more lemmings from spawning, and it can only be used once per level.

Invincibility

This makes the lemmings unable to be killed. It's mostly there for testing purposes.

One Skill Per Lemming

This gimmick makes each lemming only able to be assigned one [skill](#). After this happens, the lemming will not even be acknowledged when attempting to select a lemming.

Steel Inversion

This gimmick makes [steel](#) destructible, and [non-steel terrain](#) indestructible.

Solid Floor

This makes the bottom of the level act like [solid terrain](#) instead of a bottomless pit.

Non-Permanent Skills

This gimmick makes [permanent skills](#) ([climbers](#), [swimmers](#), [floaters](#), [gliders](#) and [disarmers](#)) only work once, after which the lemming loses that skill. It is possible to re-assign a lemming a [permanent skill](#) that it previously used.

Disobedience

This gimmick makes the lemmings reluctant to obey commands. When a lemming is assigned a [skill](#), he will simply shrug. Only if you attempt to assign a [skill](#) while he's shrugging, will he then perform the [skill](#).

Nuclear Bombers

This gimmick greatly increases the destructive area of [bombers](#).

Turnaround On Assign

Whenever a [skill](#) is assigned to a lemming, that lemming turns around before performing the [skill](#).

Countdown To Other Skills

Whenever a [skill](#) is assigned, the [skill counts](#) of all [skills](#) except that one are affected. For example, if you have 5 [bashers](#), 10 [miners](#) and 15 [diggers](#), and you use a [miner](#), you'll now have 4 [bashers](#), 10 [miners](#) and 14 [diggers](#). Whether or not you can use a [skill](#) still depends on whether you have at least one of that [skill](#). This implies in particular that the last [skill](#) with a positive number can be used infinitely often.

Assign To All

Whenever a [skill](#) is assigned to one lemming, it is simultaneously assigned to all lemmings that are currently able to perform that [skill](#). These extra assignments are free; they do not decrease the [skill count](#) or require having any more of that [skill](#) remaining.

Horizontal Wrap

Instead of the left and right sides of the level acting as walls, a lemming that walks off one side will appear on the other side. This does not mean, that you can scroll around yourself - the screen position still has to obey the borders of the level.

Vertical Wrap

The same as [Horizontal Wrap](#), except for the top and bottom of the level.

Rising Water

This causes [water](#) to rise from the bottom of the level. The speed varies from level to level.

Clock Gimmick

This causes parts of the [terrain](#) to appear or disappear based on what time of the day the level is being played at.

Classic Zombies

Compared to usual [zombies](#), these [zombies](#) behave slightly differently: They can grab [pickup-skills](#) like usual lemmings (and you will get these [skills](#)), push [buttons to unlock exits](#) and count towards the kill requirement for the [Karoshi gimmick](#).

Deadly Sides

This makes all sides of the level act like [fire traps](#), instead of three sides acting like [solid \(and steel\) terrain](#) and the bottom acting like a bottomless pit.

Invert Fall Fatality

This gimmick makes falls survivable only if they are more than the fatal fall distance, i.e. at least 64 pixels high. [Floaters](#) and [gliders](#) can still survive a fall of any length as long as they have enough time to pull out their parachute or glider. [Anti-splat pads](#) will still make any fall safe.

Cheapo Mode

This is not really a gimmick as such, it is more a settings tweak that can be used to semi-emulate Cheapo mechanics. It does not completely copy them, just reproduces some key points of them. It mostly exists for levels converted from Cheapo, and it is not recommended to use it in made-for-NeoLemmings levels.

Bait-and-Switch

This gimmick makes the [preview screen](#) initially [show a different level](#). If the player has already beaten the level in question, or has failed it and is viewing the [preview screen](#) before a repeat attempt, the correct level will be shown.

Clone On Assign

This gimmick makes most [skill](#) assignments act as assigning both the intended [skill](#) and a [cloner](#). The skills this does not apply to are [bomber](#), [stoner](#), [blocker](#), [digger](#) and [cloner](#).

Instant Pickup Skills

This gimmick makes a lemming that grabs a [pickup skill](#) immediately use that [skill](#) if he is able to do so; only if the lemming is unable to use it will the skill be added to the [player's available skillset](#). Be aware that a lemming may use a [skill](#) that is not in the [level's skillset](#), but if the lemming cannot use the [skill](#) it will be entirely lost.

Zombie on Death

It causes any lemming that dies to become a [zombie](#). [Zombies](#) and [ghosts](#) that die will not be resurrected.

Ghosts on Death

It causes any lemming that dies to become a [ghost](#). [Zombies](#) and [ghosts](#) that die will not be return to haunt lemmings again.

Permanent Blockers

This gimmick makes [blockers](#) unable to be released by removing what they are standing on. Once they fall down to ground they will continue [blocking](#). They will still revert to [non-blockers](#) if assigned a [walker](#), or if they're a [swimmer](#) and they fall into [water](#).

Release Rate Fluctuation

This gimmick leaves the player unable to change the [release rate](#), instead it alternates between the minimum and 99 each time a [skill](#) is assigned.

8 Credits

namida	for NeoLemmix and Flexi Toolkit
DMA	for the original game
EricLang and ccexplore	for Lemmix
Alex A. Denisov	for Graphics32
Erik Turner	for ZLibEx
Un4seen Development	for Bass.dll
Volker Oth and Mindless	for sharing sourcecode and information
Lemmings Forums community	for general support